

## Protein E6, HPV16 (His)

<b>Cat. No.:</b>	HY-P72260
<b>Synonyms:</b>	E6; Protein E6
<b>Species:</b>	Virus
<b>Source:</b>	E. coli
<b>Accession:</b>	P03126 (M1-L158)
<b>Gene ID:</b>	1489078
<b>Molecular Weight:</b>	Monomer: 22 kDa Dimer: 44 kDa. It is speculated that the protein forms a dimeric structure.

### PROPERTIES

<b>AA Sequence</b>	<p>M H Q K R T A M F Q    D P Q E R P R K L P    Q L C T E L Q T T I    H D I I L E C V Y C</p> <p>K Q Q L L R R E V Y    D F A F R D L C I V    Y R D G N P Y A V C    D K C L K F Y S K I</p> <p>S E Y R H Y C Y S L    Y G T T L E Q Q Y N    K P L C D L L I R C    I N C Q K P L C P E</p> <p>E K Q R H L D K K Q    R F H N I R G R W T    G R C M S C C R S S    R T R R E T Q L</p>
<b>Biological Activity</b>	Measured in a cell proliferation assay using A549 cells. The ED <sub>50</sub> for this effect is <6.8 ng/mL, corresponding to a specific activity is >1.47×10 <sup>5</sup> units/mg.
<b>Appearance</b>	Lyophilized powder
<b>Formulation</b>	Lyophilized from 0.22 μm filtered solution in 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0 or 50 mM Tris-HCl, 300 mM NaCl, 200 mM arginine, pH 8.0 or 50 mM Tris-HCl, 300 mM NaCl, 500 mM arginine, pH 8.0.
<b>Endotoxin Level</b>	<1 EU/μg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	Protein E6 is an oncoprotein that plays a major role in the induction and maintenance of cell transformation by stimulating many host cell key regulatory proteins. Protein E6 binds to host ubiquitin protein ligase UBE3A/E6-AP to degrade and inactivate tumor suppressors TP53 and TP73 by targeting the 26S proteasome. In turn, DNA damage and chromosomal instability increase, leading to cell proliferation and cancer development. Protein E6 forms complexes that degrade
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E6/E6AP, including BAK1, Fas associated death domain protein (FADD), and procaspase 8 to inhibit apoptosis. Protein E6 also suppresses the immune response by interacting with host IRF3 and TYK2. These interactions block IRF3 transcriptional activity and inhibit interferon- $\alpha$ -mediated Tyk2-mediated JAK-STAT activation, thereby inhibiting the interferon signaling pathway. Protein E6 activates telomerase in early human keratinocytes and breast epithelial cells. The interaction between Protein E6 and hDLG or other proteins containing the PDZ domain may be a potential mechanism for the development of HPV-associated cancers<sup>[1][2][3][4][5]</sup>.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA